



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,947	05/25/2001	Peter J. Fritz	55758USA4A.002	6660

32692 7590 01/27/2003

3M INNOVATIVE PROPERTIES COMPANY
PO BOX 33427
ST. PAUL, MN 55133-3427

EXAMINER

NGUYEN, DUNG V

ART UNIT PAPER NUMBER

3723

DATE MAILED: 01/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,947

Applicant(s)

FRITZ ET AL.

Examiner

Dung V Nguyen

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 25 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6. 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 7, 8, 12, 13, 17, 18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Hettes et al (USPN 5,951,389). Hettes discloses an abrasive article 300 comprising a backing plate 304 having a first major surface and a second major surface opposite the first major surface, wherein the backing plate 304 includes a central aperture 310 extending therethrough, wherein the backing plate comprises a thermal binder material and fibrous reinforce material, an abrasive layer 302 secured to the first major surface of the backing plate 304, a fastener 306 press fitted to the backing plate 304 so as to defined the central aperture, an adhesive disposed between the abrasive layer 302 and the first major surface of the backing plate 304, wherein the backing plate 304 is generally circular, wherein the article is a flap disc, wherein the abrasive layer 302 is comprised of nonwoven abrasive layer, wherein the fibrous reinforcing material comprises glass fibers, wherein the backing plate comprises glass-filled nylon, wherein the fastener 306 is a quick-change type, wherein the abrasive layer 302 comprises a substrate 124 and a plurality of abrasive particles secured to the substrate 124 by binder. Hettes also inherently disclose a method of abrading a surface comprising providing an abrasive article 300 described above, attaching the abrasive

article 300 to a shaft 316 through the central aperture 310 of the abrasive article 300, contacting a portion of the abrasive article 300 with a surface of a workpiece, moving the abrasive article 300 relative to the surface of the workpiece (note Fig. 3, 4, 9-11, col. 4, line 8 to col. 6, line 35).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 6, 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Stout et al (USPN 5,316,812). Hettes et al disclose the claimed invention as described above, however, Hettes et al do not disclose the thermoplastic binder material includes polyamide or polyester, the backing plate has a thickness of from about 0.51 mm to about 1.78 mm, about 1.02mm to about 1.40 mm or about 1.27 mm. Stout et al disclose a backing plate comprises a thermoplastic binder material includes polyamide or polyester, the backing plate has a thickness of from about 0.5 mm to about 1.2 mm, or less than about 1.50 mm (note Fig. 1 and 2, col. 2, lines 23-61, col. 5, lines 15-51). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the abrasive article of Block et al with the backing plate as disclosed by Stout et al in order to provide a harden plate that will not substantially deform or disintegrate during use.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Tinnerman (USPN 2,156,002). Hettes et al disclose the claimed invention as described above, however, Hettes et al do not disclose the fastener is shaped to form a Tinnerman nut. Tinnerman discloses a fastener to form a Tinnerman nut (note Fig. 1-4, col. 1, line 41 to col. 2, line 38). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the article of Block et al with a Tinnerman nut as disclosed by Tinnerman in order to increase the strength of the fastener.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of van Buren Jr. (USPN 4,245,438). Hettes et al disclose the claimed invention as described above, however, Hettes et al do not disclose the fastener is shaped to form a Grit-lock nut. Van Buren Jr. discloses a fastener is shaped to form a Grit-lock nut (note Fig. 1-5, col. 4, line 1 to col. 5, line 30). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the article of Block et al with a Grit-lock nut as disclosed by van Buren Jr. in order to provide quick-release hub assembly for an abrasive article.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Stout et al (USPN 5,316,812). Block et al disclose a method of making an abrasive article comprising applying adhesive to a backing plate 12 having a central aperture, disposing abrasive material 14 onto the adhesive, disposing the backing plate 12 onto a jig, disposing a fastener 18 having tines 32 so as to be concentric with the central aperture and pushing the tines 32 through the backing

Art Unit: 3723

plate 12 and folding the tines 32 so as to fixably attach the fastener 18 to the backing plate 12 (note Fig. 1-9, col. 1, lines 8-31, col. 4, lines 3-46, col. 5, line 40 to col. 6, line 45). However, Block et al do not disclose the backing plate comprises a thermal plastic binder material and fibrous reinforcing material. Stout et al disclose a backing plate comprises a thermal plastic binder material and fibrous reinforcing material (note col. 2, lines 23-61). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select a backing plate comprises a thermal plastic binder material and fibrous reinforcing material in order to provide a harden plate that will not substantially deform or disintegrate during use.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Block et al (USPN 4,439,907) in view of Stout et al (USPN 5,316,812) as applied to claim 16 above, further in view of Hettes et al (USPN 5,951,389). Block et al, as modified by Stout et al, lacks a substrate and a plurality of particles secured to the substrate by a binder. Hettes et al disclose a substrate 124 and a plurality of particles secured to the substrate by a binder (note Fig. 4, col. 4, line 58 to col. 5, line 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an abrasive article of Block et al, as modified by Stout et al, with abrasive flaps comprising a substrate and a plurality of abrasive particles in order to increase life and efficiency of the abrasive article.

9. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hettes et al (USPN 5,951,389) in view of Luedeke (USPN 6,095,910). Hettes et al disclose the claimed invention as described above, however, Hettes et al do not disclose a back up

pad mounted to a tool shaft. Luedeke discloses a back up pad mounted to a tool shaft (note Fig. 3-5, col. 3, lines 56-67). It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a backing pad in order to allow the abrasive article to be easily removed from the drive shaft.

10. Applicant has provided evidence in this file showing that the invention was owned by, or subject to an obligation of assignment to, the same entity as Luedeke at the time this invention was made. Accordingly, Luedeke is disqualified as prior art through 35 U.S.C. 102(e), (f) or (g) in any rejection under 35 U.S.C. 103(a) in this application. However, this applied art additionally qualifies as prior art under another subsection of 35 U.S.C. 102 and accordingly is not disqualified as prior art under 35 U.S.C. 103(a).

11. Applicant may overcome the applied art either by a showing under 37 CFR 1.132 that the invention disclosed therein was derived from the inventor of this application, and is therefore, not the invention "by another", or by antedating the applied art under 37 CFR 1.131.

Response to Arguments

12. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.


Art Unit: 3723

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

15. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

DVN

January 22, 2003

A handwritten signature in cursive script, appearing to read "Dung Van Nguyen".

Dung Van Nguyen
Patent Examiner